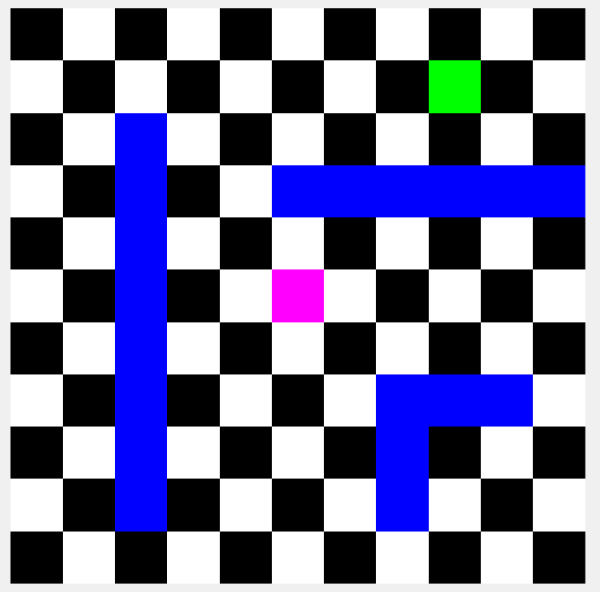
Obstacle detection robot simulation in MATLAB

- Amey Paranjape

- We will be designing a simple robot simulator as shown in the image below.
- The goal of the simulator is for the magenta robot to reach the green destination while avoiding the blue walls (the checkered walls only server a visual purpose).



- We first must draw an arena of 11x11 size. Each 'square' is a pixel.
- This drawing includes- The checkerboard pattern, Blue walls, Green destination point, Magenta robot
- We then must ask the user to input a direction and move the robot one space in that direction.
- The possible direction are north(up), south(down), east(right), west(left).
- After receiving the input, shift the position of the magenta robot correspondingly. (Make sure the checkboard pattern is maintained!)
- If a movement would cause the robot to occupy the same square as a wall, then ignore that movement.
- Continue asking the user for input until the robot reaches the destination.